

**I CLAIM:**

1       1.       A bicycle carrier for supporting a bicycle with  
2       respect to a motor vehicle, said bicycle having a seat  
3       receptacle with an inside diameter comprising:  
4       a carrier frame supported on a motor vehicle;  
5                a bicycle supporting rod having a bicycle seat  
6       receptacle contacting portion which has a narrow end  
7       and a wide end and said bicycle supporting rod being  
8       supported by said frame and oriented so that the narrow  
9       end is oriented outwardly from said carrier frame and  
10      said bicycle seat receptacle contacting portion having  
11      an outer periphery sufficiently small to fit within  
12      said seat receptacle and said wide end of said bicycle  
13      seat receptacle contacting portion being larger than  
14      said receptacle; and  
15                means for supporting said frame on said vehicle.

2.       The bicycle carrier of claim 1 wherein said  
bicycle seat receptacle contacting portion is frusto  
conical in shape and comprises a frusto conical  
portion.

3. The bicycle carrier of claim 2 wherein said frusto conical portion has a cone apex angle between about zero and five degrees.
4. The bicycle carrier of claim 3 wherein said cone apex angle is about three degrees.
5. The bicycle carrier of claim 1 wherein said bicycle seat receptacle contacting portion has a length of between four and seven inches.
6. The bicycle carrier of claim 5 wherein said bicycle seat receptacle contacting portion has a length of about six inches.
- 1 7. The bicycle carrier of claim 2 wherein said  
2 bicycle rod has a cylindrical length at a distal end of  
3 said bicycle support rod and an outside diameter of  
4 said cylindrical length is equal to an outside diameter  
5 of said narrowed end of said frusto conical portion.
8. The bicycle carrier of claim 1 wherein said carrier frame is supported by a tow hitch receptacle.

1       9.       The bicycle carrier of claim 8 wherein said carrier  
2       frame has a length of square tubing supported by a tow hitch  
3       receptacle which length of square tubing supports a generally  
4       vertical structural member which supports a generally horizontal  
5       structural member which supports at least one bicycle supporting  
6       rod.

10.      The bicycle carrier of claim 9 wherein said  
generally horizontal structural member supports a  
plurality of bicycle supporting rods.

11.      The bicycle carrier of claim 9 wherein said at  
least one bicycle supporting rod is affixed to a collar  
which includes means for being clamped onto said  
generally horizontal structural member.

12.      The bicycle carrier of claim 9 wherein said  
bicycle supporting rod is positioned at a slightly  
upward angle with respect to the horizontal.

13.      The bicycle carrier of claim 12 wherein said angle  
is about 15 degrees.

1       14.     The bicycle carrier of claim 8 wherein said  
2       carrier frame has a length of square tubing supported

3 by the tow hitch receptacle which length of square  
4 tubing supports a generally vertical structural member  
5 which supports at least one bicycle supporting rod.

1 15. A process for transporting a bicycle on a motor  
2 vehicle said bicycle having a bicycle seat held in a  
3 bicycle seat receptacle, said process comprising:

4 affixing at least one bicycle supporting rod to a  
5 frame movable with a motor vehicle said bicycle  
6 supporting rod being affixed so that a distal end of  
7 said bicycle supporting rod points outwardly, said  
8 bicycle supporting rod having a bicycle seat receptacle  
9 contacting portion ;

10 removing said bicycle seat from said bicycle seat  
11 receptacle;

12 inserting said bicycle seat receptacle over said  
13 bicycle seat receptacle contacting portion; and

14 tightening said seat receptacle against said  
15 bicycle supporting rod.

1 16. The process of Claim 15 wherein said bicycle seat  
2 receptacle contacting portion has a narrowed portion  
3 smaller than said bicycle seat receptacle and a widened  
4 portion larger than said seat receptacle and said  
5 narrowed end being oriented outwardly and said

6           inserting step includes moving said bicycle seat  
7           receptacle toward said widened portion until it will  
8           move inwardly no further.